

1 **ABSTRACT OF THE DISCLOSURE**

2 A lighting device composed of a thin LED module has an LED
3 module, a heat sink and a thermally conductive layer clamped between the
4 LED module and the heat sink. The LED module is composed of multiple
5 LED chips densely arranged on a conductive layer in an array without any
6 substrate. By removing the substrate, the lighting device is thin. Additionally,
7 the heat sink is composed of a sealed chamber, vaporable liquid inside the
8 chamber and multiple fins attached to the chamber. Since vaporable liquid
9 transfers heat rapidly and evenly in a gaseous state and the fins increase
10 outside surface areas of the heat sink, the heat sink operates more efficiently,
11 and the lighting device is not easily damaged from accumulated heat.